

## REMARKS

### STATUS OF APPLICATION

This reply is responsive to the Final Office Action mailed 11/06/07. Currently, Claims 1-17 are pending, Claims 1, 6, 7, and 17 are independent. Claims 1, 6, and 7 are currently amended, Claims 2-5 remain as originally filed, and Claims 8-17 remain as previously presented.

In the Final Office Action of 11/06/07 the Examiner rejected Claims 1-17. More specifically,

- Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.
- Claims 1, 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 "Razdan" in view of Kimura et al. (7,079,907) "Kimura."
- Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 "Razdan" in view of Kimura et al. (7,079,907) "Kimura" and further in view of Dessureault et al. (7,065,476) "Dessureault."
- Claims 8-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan et al. US 2005/0168460 "Razdan" in view of Kimura et al. (7,079,907) "Kimura" and further in view of Itoh et al. (6,741,242) "Itoh."

### DISCUSSION OF CLAIM AMENDMENTS

Applicants are herein amending claims 1, 6, 7, and 17. The substance of these amendments specify that when shape information is generated, one common linkage identifier is assigned to all shape information related to a shape element for linking them together at each shape element level. Additionally, Applicants are amending claim 7, to address a clerical error that occurred in the preparation of the claim in the last amendment filed.

Support for the claim amendment "one common identifier" can be found in Figs. 11(A) -(C) and Paragraph [0049]. More specifically, as explained in this section, Figs. 11(A) -(C) shows an internal structure of a shape element acquired, wherein a common identifier, for example, "Identifier 1" is assigned to "Attribute value A", "Attribute value B", "Two-dimensional vector data 1, and "Image data 1" that belongs to one shape element.

### CLAIM REJECTIONS UNDER 35 U.S.C. 112, FIRST PARAGRAPH

The Examiner has rejected Claims 1-16 and has stated that claimed the subject matter, "the linking is performed by sending and receiving the linkage identifier for the shape element" was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s) at the time of the application was filed, had possession of the claimed invention.

Sufficient support in the originally filed disclosure exists to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regardless, Applicant has amended these claims to require "the linkage identifier for the shape element is sent and received" for Claims 1 and 7, and has removed this section from Claim 6.

Support for the instant claim amendments may be found, *inter alia*, in Fig. 13; on page 3, first paragraph; and on page 9, last paragraph. For the convenience of the Examiner, Applicants have reproduced below the full text of the paragraphs which provide support for the amended subjected matter. (Emphasis added.)

[0009] According to yet another embodiment of the present invention, the **shape information linkage control unit** has a plurality of information processing modules for displaying the shape information, and a linkage control module connected to the plurality of information processing modules, wherein upon the indication of a specific shape element related to the shape information displayed by the information processing modules, **the linkage identifier** corresponding to that shape element **is sent** to the linkage control module, and in turn, the linkage control module **sends the identifier** to each information processing module so that **each information processing module changes, by a specified method, its display for the shape elements that correspond to the identifier.**

[0053] "A **linked processing**" is executed (Step S9) when a user specifies a specific element using a mouse 34 or keyboard 35 shown in FIG. 1 for the information displayed above. That is, the specification from the input device is received by the "information processing module" that is in charge of the respective element. If this is an information processing module A, **this information processing module A acquires the linkage identifier corresponding to the specified element and notifies its contents to the linkage**

**control module 23. The linkage control module 23 notifies the identifier received to all other information processing modules B to C.**

### **Claim Rejections under 35 U.S.C. 103:**

Concerning the rejection of Claim 1, Razdan and Kimura do not disclose all the features of Claim 1 separately or in combination. There are at least four distinct features of Claim 1 that the combination of Razdan and Kimura do not disclose the: 1) 3D shape data acquisition unit, 2) 3D shape information generation unit, 3) Linkage Identifier Setup Unit, and 4) Shape Information linkage control unit. Because the Examiner's proposed combination fails to disclose these features, the rejection of Claim 1 should be withdrawn.

Additionally, Claims 2-5, and 8-16 depend from Claim 1, and are allowable for at least the same reasons. Claims 6, 7, and 17 have similar features as those claimed in Claim 1, and should also be allowed for similar reasons.

#### **1) 3D shape data acquisition unit:**

Claim 1 of the present application requires, *inter alia*,

A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, comprising:

- a three-dimensional shape data acquisition unit for acquiring the three-dimensional shape data stored in a data storage unit;

Razdan discloses a data acquisition device 130, which is a device like a CAT scan that acquires point coordinate data. [paragraphs [0006] and [0086]] While Razdan may disclose that the point coordinate data is 3D data, he does not disclose that point coordinate data is 3D shape data. Point coordinate data merely includes a group of points. It does not include a shape element. Similarly, the three-dimensional shape data acquisition unit of Razdan does not acquire 3D shape data. Therefore, Razdan does not disclose the 3D shape data acquisition unit of the present invention. The proposed combination with Kimura does not remedy the defects in Razdan, because Kimura also does not disclose that a data acquisition unit that can acquire three-dimensional shape data. Therefore the Examiner's proposed combination does not disclose all the features of Claim 1.

2) 3D shape information generation unit:

Claim 1 of the present application also requires, *inter alia*:

A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, comprising:

- a three-dimensional shape information generation unit for generating, at least two types of shape information related to each shape element based on parameters entered by a user;

Neither Razdan nor Kimura disclose a three-dimensional shape information generation unit. Though the Examiner has alleged that Kimura discloses this component, upon close review of the claim, it is clear that Kimura does not disclose this feature.

What Kimura discloses is a reference relationship information generator 31 which can create bi-directional reference relationships between design information and geometry data that are required for design activity. [column 2, lines 42-50] In Kimura, both the geometry data and the design information are created separately by the users, and not created by the reference relationship information generator 31. [column 1, line 48 - column 2, line 50 ]

Therefore, Kimura lacks a three-dimensional shape information generation unit which generates shape information. Therefore the Examiner's proposed Razdan-Kimura combination fails to teach all the features of Claim 1.

3) Linkage Identifier Setup Unit:

Claim 1 of the present application additionally requires, *inter alia*:

A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, comprising:

- a linkage identifier setup unit for adding one common linkage identifier for linking said at least two types of shape information per shape element, when generating the shape information;

Neither Razdan nor Kimura disclose a linkage identifier setup unit. Though the Examiner has alleged that Kimura discloses this component, upon close review of the claim, it is clear that Kimura does not disclose this feature.

Kimura discloses linking a plurality of shape information to one shape element. Kimura discloses this linking through a one-to-one reference relationship: *i.e.* one geometry

data is linked to one information data. [Fig. 7, Column 9, line 36 to Column 10, line 6].

Claim 1 requires the linkage identifier setup unit for adding one linkage identifier for linking said at least *two* types of shape information *per* shape element. Kimura effectively discloses a linkage identifier setup unit for adding one linkage identifier for linking only *one* type of shape information with *one* shape elements. [Fig. 7, Column 9, line 36 to Column 10, line 6].

In the present invention, the linkage identifier is a common identifier to all shape information<sup>1</sup> of a particular shape element<sup>2</sup>. In the present invention, *one common* identifier is assigned across all of the constituting information of each shape element. Kimura discloses linking shape information to shape elements via a one-to-one relationship [Fig. 7, Column 9, line 36 to Column 10, line 6]. Kimura does not disclose a common identifier assigned to all of the linked information. Similarly, Kimura also does not process two or more types of information per shape using the linkage identifier, because Kimura does not use a common linkage identifier per shape element.

#### 4) Shape Information linkage control unit:

Claim 1 also requires:

A system for acquiring shape information from three-dimensional shape data using a computer system, said three-dimensional shape data including at least one shape element, comprising:

- a shape information linkage control unit for, while referring to said linkage identifier, linking and processing said at least two types of shape information related to a particular shape element selected by the user, wherein the linkage identifier for the shape element is sent and received.

Additionally, neither Razdan nor Kimura disclose a shape information linkage control unit. As discussed above, Kimura does not have a generation unit that creates at least two shape information for each shape element. Nor does Kimura have a linkage identifier setup unit for creating a common linking identifier for linking said at least two types of shape information per shape element. Similarly Kimura does not have a shape information linkage control unit, because the unit must be capable of linking and processing at least *two* types of

<sup>1</sup> A shape element may be a group, such as a component of a three dimensional object or a layer, such as a logical structure of a three dimensional object. In the example of a printer, a shape element might be a printer tray. [Fig. 9 and paragraph 0039 and 0049]

<sup>2</sup> A shape information may be the type of information such as two dimensional vector data, or image data. [paragraph 0007]

shape information related to *a particular* shape element selected by the user. Since Kimura's reference relationship information generator creates only a single, one-to-one linkage between the shape element and shape information, Kimura does not disclose a shape information control unit for linking and processing *at least two types of shape information* related to *a particular* shape element.

## **CONCLUSION**

In view of the foregoing amendment and remarks, it is believed that the claims in this application are now in condition for allowance. Early and favorable reconsideration is respectfully requested.

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